

IT IS CLAIMED:

1. A guide support for a drill to be rotatably mounted in a support bearing assembly comprising a cylindrical body made of a resilient polymer having an opening extending therethrough, a first radially extending flange means at one end thereof, an annular groove near the opposite end thereof defined by second and third radially extending flanges of lesser diameter than said first flange.

2. A guide support according to claim 1, wherein said second radially extending flange is between said first and third radially extending flanges and includes a shoulder portion angling gradually into said groove.

3. A guide support according to claim 2 wherein said second flange is of a greater diameter than said third flange.

4. A guide support according to claim 3 wherein said annular groove decreases in diameter from said second flange to said third flange.

5. A guide support according to claim 1 wherein the polymer is PVC.

6. A guide support according claim 5 wherein the

polymer has a hardness range of 50-120 A hardness.

7. A guide support according to claim 1 wherein the inner wall of the cylindrical body includes a V-shaped portion.

8. The guide support according to claim 1 further comprising a locking ring.

9. The guide support according to claim 1 further including a chip deflector attached to said guide support.

10. The guide support according to claim 9 wherein said chip deflector comprises a cap means and metal disc, said cap means be constructed and arranged to mate with said annular groove.

11. The guide support according to claim 10 wherein said cap means is made of a resilient polymer material.

12. The guide support according to claim 11 wherein said cap means includes an annular ring for mating with said annular groove.

13. A guide support for a drill to be rotatably

mounted in a support bearing assembly comprising a cylindrical body made of a resilient polymer having an opening extending therethrough, a first radially extending flange means at one end thereof and a second radially extending flange means at the opposite end thereof, said second radially extending flange means including a shoulder portion.

14. A guide support according to claim 13 wherein said second flange is of a lesser diameter than said first flange.

15. A guide support according to claim 14 wherein the inner wall of the cylindrical body includes a V-shaped portion.

16. A guide support according to claim 15 wherein said polymer is PVC.

17. A guide support according to claim 16 wherein said polymer has a hardness range of 50-120 Å hardness.

18. A guide support according to claim 14 wherein said first flange has a width greater than one-quarter inch.

19. A drill guide assembly for use in relation to

a chip box comprising

a drill guide having a cylindrical body member of a resilient polymer material having a central opening extending therethrough, a first radially extending flange means at one end thereof, an annular groove near the opposite end thereof defined by second and third radially extending flanges;

a chip deflector adaptor means connected to said drill guide, and

a chip deflector assembly connected to said chip deflector adaptor means.

20. The drill guide assembly according to claim 19 wherein the chip deflector adaptor means includes a body portion constructed and arranged at one end to mate with the drill guide and at the opposite end having an outwardly extending neck with a radially extending flange constructed and arranged to mate with said chip deflector assembly.

21. The drill guide assembly according to claim 20 wherein said chip deflector assembly comprises a cap and metal disc.

22. The drill guide assembly according to claim 21 wherein said cap is made of a resilient polymer material.

23. The drill guide assembly according to claim 22 wherein said cap includes an annular ring for mating with said chip deflector adaptor.

24. The drill guide assembly according to claim 19 wherein said chip deflector assembly comprises a cap and a metal disc.

25. A chip deflector assembly for attachment to a drill guide comprising a cap member having an opening therethrough and constructed and arranged to attach to said drill guide and a metal disc member in said cap member.

26. A chip deflector assembly according to claim 25 wherein said cap member comprises a resilient polymer material.

27. A chip deflector assembly according to claim 26 wherein said metal disc member is removably insertable in said cap member.

28. A chip deflector assembly according to claim 26 wherein said means for attachment for said drill guide and said cap member comprises an annular groove in said drill guide and an annular ring on said cap member.

29. A chip deflector assembly according to claim 27 wherein said cap member includes a lip means for securing said metal disc in place.

30. A chip deflector cap for a drill guide comprising a body portion having an opening extending therethrough and means for attachment to a drill guide.

31. A chip deflector cap according to claim 30 wherein said means for attachment to said drill guide comprises an annular ring.

32. A chip deflector cap according to claim 31 wherein said cap is made from material selected from the group consisting of metal and plastic.

33. A chip deflector cap according to claim 30 wherein said cap is metal and includes a lip means circumscribing about one half the circumference of said cap and constructed and arranged for holding a metal chip deflector disc in place.

34. A chip deflector cap according to claim 33 further including at least one retainer member opposite said lip means to further hold said metal chip deflector in place.

35. A chip deflector cap according to claim 34 further including a metal chip deflector disc secured by said lip means and said retainer member.

36. A stabilizer assembly for a gun drill comprising a male section having means for attachment to a drill guide and a female metal section having means for attachment to a drill guide; said male and female sections further having means for connection to each other.

37. A stabilizer assembly for a gun drill according to claim 36 wherein said means for connecting said male and female sections are thread means.

38. A stabilizer assembly for a gun drill according to claim 36 further comprising a first drill guide attached to said male section and a second drill guide attached to said female section.

39. A stabilizer assembly for a drill guide according to claim 38 wherein at least one of said drill guides includes a cylindrical body made of a resilient polymer having an opening extending therethrough, a first radially extending flange means at one end thereof, an annular groove near the opposite end thereof defined by second and third radially extending flanges of lesser

diameter than said first flange.

40. A stabilizer for a drill guide according to claim 39 wherein said second radially extending flange is between said first and third radially extending flanges and includes a shoulder portion.

41. A stabilizer for a drill guide according to claim 40 wherein said annular groove is of varying diameter.

42. A guide support for a drill to be rotatably mounted in a support bearing assembly comprising a cylindrical body made of a resilient polymer having an opening extending therethrough, a first radially extending flange means at about the center thereof, an annular groove near one end thereof defined by second and third radially extending flanges of lesser diameter than said first flange.

43. A guide support according to claim 42, wherein said second radially extending flange is between said first and third radially extending flanges and includes a shoulder portion.

44. A guide support according to claim 43 wherein said annular groove is of varying diameter.

45. A guide support according to claim 44 wherein the polymer is PVC.

46. A guide support according to claim 43 wherein the inner wall of the cylindrical body includes a V-shaped portion.

47. A guide support according to claim 42 wherein said second flange is of a greater diameter than said third flange.

48. The guide support of claim 42 further comprising a locking ring.

49. The guide support of claim 42 further comprising a second annular groove at the opposite end thereof defined by fourth and fifth radially extending flanges.

50. A guide support according to claim 49, wherein said fourth radially extending flange is between said first and fifth radially extending flanges and includes a shoulder portion.

51. A guide support according to claim 50 wherein said fourth flange is of a greater diameter than said fifth

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flange.